

IERG4210 WEB PROGRAMMING AND SECURITY (2022 SPRING)

ASSIGNMENT MARKING GUIDELINES

REVISION HISTORY

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GENERAL GUIDELINES

The assignment is designed to let students practice what they have learned in the course. Students must be aware of web application security throughout the web development. The whole assignment is split into 6 phases, leading all the way to a creative and functional shopping cart upon completion. Students should take a real-world website, parknshop.com, as a reference. In the assignment, students are expected to understand and apply proper security design principles and programming skills, regardless of which programming languages and libraries the students desire to use. The marking checklist included in the next page therefore outlines only the general requirements with a result-oriented basis in order to encourage students' creativities. For detailed guidance, students should refer to both lecture and tutorial notes.

SUBMISSION POLICY

Students are required to package all of their source code, a README file, and any external resources (e.g. database, images, css and js files) into a zip file and submit it to the Blackboard. Each phase is associated with a firm submission deadline.

- Late Submission Penalty -- Late submission will lead to your mark reduction by the formula 0.9^n , where n is the round-up number of days delayed (e.g. Assume your score is N and your submission is 9 hrs late $\rightarrow 0.9 \times N$, 25 hrs late $\rightarrow 0.81 \times N$, 49 hrs late $\rightarrow 0.729 \times N$, and so forth).
- *Final Demonstration* – Students will sign up for a timeslot to demonstrate their websites to a marker, who will then grade it according to the checklist. The marker will then evaluate the student's understanding with questions.

HONESTY IN ACADEMIC WORK

CUHK places very high importance on honesty in academic work submitted by students, and adopts a policy of *zero tolerance* on cheating in examinations and plagiarism. Students are NOT allowed to submit anything that are plagiarised. Therefore, we treat every assignment our students submit as original except for source material explicitly acknowledged. We trust that students acknowledge and are aware of University policy and regulations on honesty in academic work, and of the disciplinary guidelines and procedures applicable to breaches of such policy and regulations, as contained in the website <http://www.cuhk.edu.hk/policy/academichonesty/>.

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PHASE 3: AJAX SHOPPING LIST (DEADLINE: **MAR 11, 2022**)

(SUBTOTAL: 13')

In this phase, you will implement the shopping list, which allows users to shop around your products. This phase is designed to let you practise Javascript programming.

1. JS: Dynamically update[#] the *shopping list*
 - o When the *addToCart* button of a product is clicked, add it to the shopping list _____ / 1'
 - Adding the same product twice will display only one row of record
 - o Once a product is added,
 - Users are allowed to update its *quantity* and delete it with a number input, or two buttons for increment and decrement _____ / 1'
 - Store its *pid* and *quantity* in the browser's `localStorage` _____ / 2'
 - Get the *name* and *price* over AJAX (with *pid* as input) _____ / 0'
 - Calculate and display the total amount at the client-side _____ / 1'
 - o Once the page is reloaded, the *shopping list* is restored _____ / 2'
 - Page reloads when users browse another category or visit the product detail page
 - Populate and retrieve the stored products from the `localStorage`
 - o Supporting pagination/AJAX infinite scroll when browsing products in the main page _____ / 3'
- [#]The whole process of *shopping list* management must be done without a page load